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GRAPH ATTRIBUTES: RSPEC 9 3 31 NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE

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FULL SEARCH INITIATED 16:38:35 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 98194 TO ITERATE

100.0% PROCESSED 98194 ITERATIONS 89 ANSWERS

SEARCH TIME: 00.00.01

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=> s 1321 L3 L4

=> d bib abs 1-21

- ANSWER 1 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- ΑN 2008:1007107 CAPLUS
- 149:315569 DN
- ΤI Therapeutic release agents, esters of alkylcarbamic acids, as inhibitors of fatty acid amide hydrolase activity
- Dasse, Olivier; Parrott, Jeff A.; Putman, David; Adam, Julia IN
- N.V. Organon, Neth. PΑ
- PCT Int. Appl., 250pp. SO CODEN: PIXXD2
- DT Patent
- LA English

FAN.	FAN.CNT 1 PATENT NO.					KIND DATE			APPLICATION NO.					DATE				
ΡI	WO	2008100977			A2		2008			WO 2008-US53785					20080213			
	WO	2008	1009	77		А3		2008	1218									
		W:	ΑE,	ΑG,	AL,	ΑM,	ΑO,	ΑT,	ΑU,	ΑZ,	ΒA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
			CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
			FI,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
			KG,	KM,	KN,	KP,	KR,	KΖ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
			ME,	MG,	MK,	MN,	MW,	MX,	MY,	MΖ,	NA,	NG,	ΝI,	NO,	NZ,	OM,	PG,	PH,
			PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	ΤJ,	TM,
			TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW			
		RW:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HR,	HU,
			IE,	IS,	IT,	LT,	LU,	LV,	MC,	MT,	NL,	NO,	PL,	PT,	RO,	SE,	SI,	SK,
			TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,
			TG,	BW,	GH,	GM,	KE,	LS,	MW,	MΖ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,
			AM,	AZ,	BY,	KG,	KZ,	MD,	RU,	ΤJ,	TM,	AP,	EA,	EP,	OA			
PRAI	US	2007	-889	909P	·	Р	·	20070214			·	·	·	·				
	US 2007-948082P				P		2007	0705										

OS MARPAT 149:315569

Pharmacol. inhibition of fatty acid amide hydrolase (FAAH) activity leads to increased levels of fatty acid amides. Esters of alkylcarbamic acids are disclosed that are inhibitors of FAAH activity. Compds. disclosed herein inhibit FAAH activity. Described herein are processes for the

preparation of esters of alkylcarbamic acid compds., compns. that include them, and methods of use thereof. Thus, to prepare a parenteral pharmaceutical composition for injection, 100 mg of a water-soluble salt of a compound of the invention was dissolved in DMSO and mixed with 10 mL of 0.9% sterile saline; the mixture was incorporated into dosage form unit suitable for administration by injection.

- L4 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2007:610508 CAPLUS
- DN 147:203049
- TI Unbiasing Scoring Functions: A New Normalization and Rescoring Strategy
- AU Carta, Giorgio; Knox, Andrew J. S.; Lloyd, David G.
- CS Molecular Design Group School of Biochemistry Immunology, Trinity College Dublin, Dublin, 2, Ire.
- SO Journal of Chemical Information and Modeling (2007), 47(4), 1564-1571 CODEN: JCISD8; ISSN: 1549-9596
- PB American Chemical Society
- DT Journal
- LA English
- AΒ Ligand bias can contribute significantly to the number of false positives observed in a virtual screening campaign. Using a receptor-based docking approach against a well-established target of therapeutic importance, estrogen receptor  $\alpha$  (ER $\alpha$ ), coupled with several common scoring functions (ChemGuass, ChemGauss2, ChemScore, ScreenScore, ShapeGauss, and PLP), taken both individually and as a consensus, the authors sought to examine the characteristics of mols. retrieved by each. It has been previously shown that scoring functions (mainly empirical) exhibit bias in prioritizing more complicated mols. arising from additive components within the function. Using Spearmen's correlation coefficient, the authors show that a large set of descriptors calculated for a docked set of mols. exhibit pos. correlation with the ranked position in a hit list. Moreover, most of these descriptors correlate well with MW. To this end, rather than penalizing the docked score of all heavy mol. weight (MW) mols. and rewarding those of lower MW, as is common practice, the authors examine the impact of penalizing the score only of those mols. which were of higher MW, leaving lower MW mols. unaffected. Here, the authors introduce a new power function to aid the process. Using scoring frequency anal. and SIFt fingerprints, the authors achieved a more meaningful anal. of virtual screening (VS) performance than with enrichment calcns., facilitating target-specific VS method development.
- OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
  RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
- ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2007:242067 CAPLUS
- DN 146:474747
- TI Protein Flexibility and Species Specificity in Structure-Based Drug Discovery: Dihydrofolate Reductase as a Test System
- AU Bowman, Anna L.; Lerner, Michael G.; Carlson, Heather A.
- CS Department of Medicinal Chemistry and Biophysics Research Division, University of Michigan, Ann Arbor, MI, 48109-1065, USA
- SO Journal of the American Chemical Society (2007), 129(12), 3634-3640 CODEN: JACSAT; ISSN: 0002-7863
- PB American Chemical Society
- DT Journal
- LA English
- AB In structure-based drug discovery, researchers would like to identify all possible scaffolds for a given target. However, techniques that push the boundaries of chemical space could lead to many false positives or inhibitors that lack specificity for the target. Is it possible to broadly identify

the appropriate chemical space for the inhibitors and yet maintain target specificity. To address this question, we have turned to dihydrofolate reductase (DHFR), a well-studied metabolic enzyme of pharmacol. relevance. We have extended our multiple protein structure (MPS) method for receptor-based pharmacophore models to use multiple x-ray crystallog. structures. Models were created for DHFR from human and Pneumocystis carinii. These models incorporate a fair degree of protein flexibility and are highly selective for known DHFR inhibitors over drug-like non-inhibitors. Despite sharing a highly conserved active site, the pharmacophore models reflect subtle differences between the human and P. Carinii forms, which identify species-specific, high-affinity inhibitors. We also use structures of DHFR from Candida albicans as a counter example. The available crystal structures show little flexibility, and the resulting models give poorer performance in identifying species-specific inhibitors. Therapeutic success for this system may depend on achieving species specificity between the related human host and these key fungal targets. The MPS technique is a promising advance for structure-based drug discovery for DHFR and other proteins of biomedical interest.

OSC.G 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2006:408205 CAPLUS
- DN 146:870
- TI Three-dimensional models of non-steroidal ligands: A comparative molecular field analysis
- AU Menezes, Irwin R. A.; Leitao, Andrei; Montanari, Carlos A.
- CS Nucleo de Estudos em Quimica Medicinal-NEQUIM, Departamento de Quimica, Universidade Federal de Minas Gerais, Belo Horizonte-MG, 31270-901, Brazil
- SO Steroids (2006), 71(6), 417-428 CODEN: STEDAM; ISSN: 0039-128X
- PB Elsevier B.V.
- DT Journal
- LA English
- AB The estrogen receptor, ER, is an important biol. target whose inhibition is known to be therapeutically relevant in the treatment of postmenopausal osteoporosis. In the present study, two prediction methods (CoMFA and GRIND (Almond)) were used to describe the binding modes of a set of estrogen receptor ligands. The critical alignment step presented in CoMFA was solved by using the information of the mol. descriptors space generated by grid-independent descriptors (GRIND). Then, it was possible to build robust and high predictive models based on the alignment-independent model. Since the structure of estrogen receptor is solved, the results of the present 3D QSAR models, given by the PLS maps based on mol. interaction fields (MIF) were compared to ligand-binding ER domains and showed good agreement.
- OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
  RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2006:94509 CAPLUS
- DN 144:327327
- TI Knowledge-Based Interaction Fingerprint Scoring: A Simple Method for Improving the Effectiveness of Fast Scoring Functions
- AU Mpamhanga, Chidochangu P.; Chen, Beining; McLay, Iain M.; Willett, Peter
- CS Department of Chemistry, University of Sheffield, Sheffield, S3 7HF, UK
- SO Journal of Chemical Information and Modeling (2006), 46(2), 686-698 CODEN: JCISD8; ISSN: 1549-9596
- PB American Chemical Society

- DT Journal
- LA English
- A new method for the postprocessing of docking outputs has been developed, AB based on encoding putative 3D binding modes (docking solns.) as ligand-protein interactions into simple bit strings, a method analogous to the structural interaction fingerprint. Instead of employing traditional scoring functions, the method uses a series of new, knowledge-based scores derived from the similarity of the bit strings for each docking solution to that of a known reference binding mode. A GOLD docking study was carried out using the Bissantz estrogen receptor antagonist set along with the new scoring method. Superior recovery rates, with up to 2-fold enrichments, were observed when the new knowledge-based scoring was compared to the GOLD fitness score. In addition, top ranking sets of mols. (actives and potential actives or decoys) were structurally diverse with low mol. wts. and structural complexities. Principal component anal. and clustering of the fingerprints permits the easy separation of active from inactive binding modes and the visualization of diverse binding modes.
- OSC.G 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
  RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2006:26815 CAPLUS
- DN 144:163512
- TI A Selective Estrogen Receptor Modulator for the Treatment of Hot Flushes
- AU Wallace, Owen B.; Lauwers, Kenneth S.; Dodge, Jeffrey A.; May, Scott A.; Calvin, Joel R.; Hinklin, Ronald; Bryant, Henry U.; Shetler, Pamela K.; Adrian, Mary D.; Geiser, Andrew G.; Sato, Masahiko; Burris, Thomas P.
- CS Lilly Research Laboratories, Lilly Corporate Center, Eli Lilly and Company, Indianapolis, IN, 46285, USA
- SO Journal of Medicinal Chemistry (2006), 49(3), 843-846 CODEN: JMCMAR; ISSN: 0022-2623
- PB American Chemical Society
- DT Journal
- LA English
- OS CASREACT 144:163512
- AB A selective estrogen receptor modulator (SERM) for the potential treatment of hot flushes is described. (R)-(+)-7,9-difluoro-5-[4-(2-piperidin-1-ylethoxy)phenyl]-5H-6-oxachrysen-2-ol, LSN2120310, potently binds ER $\alpha$  and ER $\beta$  and is an antagonist in MCF-7 breast adenocarcinoma and Ishikawa uterine cancer cell lines. The compound is a potent estrogen antagonist in the rat uterus. In ovariectomized rats, the compound lowers cholesterol, maintains bone mineral d., and is efficacious in a morphine dependent rat model of hot flush efficacy.
- OSC.G 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
- RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2006:23807 CAPLUS
- DN 144:343802
- ${\tt TI}$  Probing the binding of ligands to estrogen receptor using an empirical system
- AU Dottorini, T.; Cozzini, P.
- CS Department of Experimental Medicine and Biochemical Sciences, Microbiology Section, University of Perugia, Perugia, 06122, Italy
- SO International Journal of Quantum Chemistry (2005), Volume Date 2006, 106(3), 641-646 CODEN: IJQCB2; ISSN: 0020-7608
- PB John Wiley & Sons, Inc.
- DT Journal

- LA English
- AB The estrogen receptor (ER) is a ligand-regulated transcription factor whose activity as an inducer or repressor of gene transcription depends on the nature of the ligand to which it is bound. The aim of this work is to evaluate the behavior of a set of compds. (antagonist mols.), using different docking expts., to understand the relationship between ERa and such new ligands. With regard to the chemical properties of the ligands analyzed, the authors defined a specific guideline procedure designed for docking expts. In the authors' approach, the authors propose the use of the HINT scoring function in docking methodologies as a means of assessing the consistency of a docking solution, to discriminate correctly or near-correctly docked orientations from incorrectly docked ones, thus compensating for the lack of exptl. data.
- OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
  RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2005:732663 CAPLUS
- DN 143:193907
- TI Preparation of 5H-6-oxa-chrysene derivatives as selective estrogen receptor modulators
- IN Dodge, Jeffrey Alan; Hopkins, Randall Bruce; Wallace, Owen Brendan
- PA Eli Lilly and Company, USA
- SO PCT Int. Appl., 48 pp. CODEN: PIXXD2
- DT Patent
- LA English

FAN.CNT 1

	PATENT NO.				KIND DATE			APPLICATION NO.					DATE					
ΡI	WO	2005	0732	44		A1 20050811		WO 2005-US19					20050118					
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
			CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FΙ,	GB,	GD,
			GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KΖ,	LC,
			LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,
			NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,
			ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW
		RW:	BW,	GH,	GM,	ΚE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,
			AZ,	BY,	KG,	KΖ,	MD,	RU,	ТJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,
			EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	IS,	ΙΤ,	LT,	LU,	MC,	NL,	PL,	PT,
			RO,	SE,	SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,
			MR,	NE,	SN,	TD,	TG											
	EP	1713	820			A1 20061025			EP 2005-704873						20050118			
		R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙΤ,	LI,	LU,	NL,	SE,	MC,	PT,
			ΙE,	SI,	LT,	FΙ,	RO,	CY,	TR,	BG,	CZ,	EE,	HU,	PL,	SK,	IS		
	US	2008	0221	163		A1		2008	0911	1	US 2	006-	5970	90		2	0060	711
PRAI	US	2004	-538	302P		P		2004	0122									
	WO	2005	-US1	9		W		2005	0118									
OS GI																		

AB The present invention relates to a selective estrogen receptor modulators, I (n = independently 0,1,2; R8 = H, SO2-alkyl, COR3; R0 = OH, CF3, C1-6 alkyl, or C1-6 alkoxy; R1 = C1-6 alkyl, C1-6 alkoxy, amine CF3, CH2CF3; R2 = H, Me; X = O or substituted amine; Y = O or S), for treating endometriosis and uterine leiomyoma.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2005:732631 CAPLUS
- DN 143:193912
- TI Preparation of piperidine derivatives as estrogen antagonists in the uterus that do not stimulate the ovaries for treating endometriosis and uterine leiomyoma
- IN Dally, Robert Dean; Dodge, Jeffrey Alan; Hummel, Conrad Wilson; Jones, Scott Alan; Shepherd, Timothy Alan; Wallace, Owen Brendan; Weber, Wayne Woodrow, II
- PA Eli Lilly and Company, USA
- SO PCT Int. Appl., 112 pp.

CODEN: PIXXD2

DT Patent

LA English

GΙ

FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. WO 2005073205 WO 2005-US21 PΙ A1 20050811 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20061011 EP 2005-704875 EP 1709022 Α1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS Α1 20070517 US 2006-597008 20060706 US 20070111988 PRAI US 2004-538441P Ρ 20040122 US 2004-582945P Ρ 20040625 WO 2005-US21 W 20050118 CASREACT 143:193912; MARPAT 143:193912 OS

AΒ The present invention relates to alcs. (shown as I; variables defined below; e.g. [4-[6-methoxy-1-[4-[2-(piperidin-1v1)ethoxy|phenoxy|naphthalen-2-y1|pheny1|methanol) or a pharmaceutical acid addition salt thereof and carboxy compds. (shown as II; variables defined below; e.g. 3-[6-hydroxy-1-[4-[2-(piperidin-1yl)ethoxy]phenoxy]naphthalen-2-yl]-N,N-dimethylbenzamide hydrochloride) or a pharmaceutical salt thereof as selective estrogen receptor modulators, useful, e.g., for treating endometriosis and/or uterine leiomyoma/leiomyomata. Other similar Markush formulas for claimed compds. are given in the claims. In the Ishikawa cell proliferation assay, cell proliferation (using an alkaline phosphatase readout) was measured in both an agonist mode in the presence of I or II alone, and in an antagonist mode in which the ability of I or II to block estradiol stimulation of growth was measured. In the agonist mode, the compds. of 14 examples were tested and are less stimulatory than tamoxifen. For example, 3-[6-hydroxy-1-[4-[2-(piperidin-1-yl)ethoxy]phenoxy]naphthalen-2-yl]-N,Ndimethylbenzamide hydrochloride had a relative % efficacy of 15% and 2-hydroxy-5-[4-[2-(piperidin-1-y1)ethoxy]phenyl]-5H-6-oxachrysene-7carboxylic acid trifluoroacetate had a relative % efficacy of 25%. In the antagonist mode, these same compds. inhibited greater than at least 80% of the 1 nM estradiol response. For example, 3-[6-hydroxy-1-[4-[2-(piperidin-1-yl)ethoxy]phenoxy]naphthalen-2-yl]-N,Ndimethylbenzamide hydrochloride had an IC50 of 9 nM and a % efficacy of 95% and 2-hydroxy-5-[4-[2-(piperidin-1-y1)ethoxy]pheny1]-5H-6-oxachrysene-7-carboxylic acid trifluoroacetate had an IC50 of 36 nM and a % efficacy of 92%. Results of a 3-day rat uterus antagonist assay are also reported. One example compound was tested in a 4-day OVX rat uterine agonist assay and did not cause any dose-related statistically significant increase in uterine eosinophil peroxidase activity. Two example compds. did not significantly elevate circulating estradiol or LH levels. For I: m = 0-2; RO is H, F or OH; R1 is H, SO2(n-C4-C6 alkyl) or COR4; R2 is H or Me provided that if m is 1 or 2, then R2 must be H and that if m is 0, then R2 must be Me; X is O or NR5; Y is S or CH:CH; R4 is C1-C6 alkyl, C1-C6 alkoxy, NR6R7, phenoxy, or Ph (un)substituted with halo; R5 is H or C1-C6 alkyl; R6 and R7 = H, C1-C6 alkyl or phenyl; R is H and X1 is O, CH2 or CO or R combines with X1 to form III (X2 is O or S); and R3 and R3a = H or C1-C6 alkyl. For II: m = 0-2; R1 is H, SO2(n-C4-C6 alkyl) or COR4; R2 is H or Me provided that if m is 1 or 2, then R2 must be H and that if m is 0, then R2 must be Me; X is O or NR5; Y is S or CH:CH; R4 is C1-C6 alkyl, C1-C6 alkoxy, NR6R7, phenoxy, or Ph (un)substituted with halo; R5 is H or C1-C6 alkyl; R6 and R7 = H, C1-C6 alkyl or phenyl; R is H and X1 is O, CH2 or CO or R combines with X1 to form IV (X2 is O or S); R3b is NR8R9 or OR10 or when R is H, R3b may combine with the Ph with which it is attached to form V (W and W1 are CH2 or C:O provided that at least one of W or W1 must be C:O; X3 is NR11 or O; R8 and R9 = H or C1-C6 alkyl or R8 and R9 may combine with the N to which they are both attached to form a morpholino, pyrrolidino or piperidino ring; R10 and R11 = H or C1-C6 alkyl). Although the methods of preparation are not claimed, .apprx.70 example prepns. are included. For example, 3-[6-hydroxy-1-[4-[2-(piperidin-1-yl)ethoxy]phenoxy]naphthalen-2yl]benzamide hydrochloride was prepared (88 %) by HCl treatment of 3-[6-hydroxy-1-[4-[2-(piperidin-1-yl)ethoxy]phenoxy]naphthalen-2yl]benzonitrile hydrochloride, which was prepared (98 %) by coupling trifluoromethanesulfonic acid 6-methoxy-1-[4-[2-(piperidin-1yl)ethoxy]phenoxy]naphthalen-2-yl ester (preparation described) with

3-cyanophenylboronic acid followed by conversion of the OMe to OH group. OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS) THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 7 ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 10 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN L4ΑN 2005:732630 CAPLUS DN143:211842 ΤI Preparation of piperidine derivatives as selective estrogen receptor modulators for the treatment of vasomotor symptoms Dally, Robert Dean; Dodge, Jeffrey Alan; Frank, Scott Alan; Hinklin, INRonald Jay; Shepherd, Timothy Alan; Wallace, Owen Brendan PAEli Lilly and Company, USA SO PCT Int. Appl., 139 pp. CODEN: PIXXD2 DT Patent English LA FAN.CNT 1 KIND DATE APPLICATION NO. PATENT NO. DATE ----\_\_\_\_\_\_ A1 20050811 WO 2005-US20 WO 2005073204 PΙ 20050118 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2005207821 20050811 AU 2005-207821 A1 20050118 CA 2551956 20050811 CA 2005-2551956 Α1 20050118 EP 2005-704874 EP 1709021 Α1 20061011 20050118 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU CN 1910167 20070207 CN 2005-80002914 20050118 Α BR 2005006721 20070502 BR 2005-6721 Α 20050118 JP 2006-551097 JP 2007519721 Τ 20070719 20050118 SG 149867 A1 20090227 SG 2009-414 20050118 ZA 2006005665 A 20080528 US 20090023917 A1 20090122 KR 2006129277 A 20061215 ZA 2006-5665 20060710 US 2006-597241 20060718 A 20061215 B1 20080731 KR 2006-714630 20060720 KR 849559 MX 2006008291 A
NO 2006003760 A
IN 2006KN02478 A
KR 2008016755 A
PRAI US 2004-538342P P
US 2004-538442P P
WO 2005-US20 20080731 20061002 20061016 20070615 20080221 MX 2006-8291 20060721 MX 2006-8291 NO 2006-3760 20060822 IN 2006-KN2478 20060822 KR 2008-703065 20080205 20040122 20040122

20050118

WO 2005-US20 W 20050110 KR 2006-714630 A3 20060720 CASREACT 143:211842; MARPAT 143:211842

OS GΙ

<sup>\*</sup> STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The present invention relates to selective estrogen receptor modulators (no data; shown as I; variables defined below; e.g.  $1-[2-[4-[[2-(2,6-\text{difluorophenyl})-6-\text{methoxynaphthalen-1-}} \text{yl]oxy]phenoxy]ethyl]piperidine (shown as II)) or pharmaceutical acid addition salts thereof useful for treating vasomotor symptoms, in particular hot flashes, night sweats and other symptoms that affect women around menopause. In a morphine withdrawal, rat hot flash model, representative I were tested <math>\leq 30 \text{ mg/kg PO}$  and caused an attenuation of tail skin temperature increase, as measured by temperature change 15 min post naloxone injection

or AUC over 45 min post naloxone administration. For I: m = 0-2; n = 1-4; R is H or Me provided that if m is 1 or 2, then R must be H and that if m is 0, then R must be Me; R1 is H, SO2(n-C4-C6 alkyl) or COR2; X is 0 or NR3; X1 is 0, CH2 or C:0; R6 is H or F or R6 combines with X1 to form III (Y is 0, S, SO or NR4; e.g. 7,9-difluoro-5-[4-[2-(piperidin-1-yl)ethoxy]phenyl]-5H-6-oxachrysen-2-ol (shown as IV)); R2 is C1-C6 alkyl, C1-C6 alkoxy, NR5R5a, phenoxy, or Ph (un)substituted with halo; R3 and R4 = H or C1-C6 alkyl; and R5 and R5a = H, C1-C6 alkyl or Ph. Although the methods of preparation are not claimed, .apprx.150 example prepns. are included. For example, II was prepared (32 %) from trifluoromethanesulfonic acid 6-methoxy-1-[4-[2-(piperidin-1-yl)ethoxy]phenoxy]naphthalen-2-yl ester (preparation given) and (2,6-difluorophenyl)boronic acid in DMF using potassium phosphate and tetrakis(triphenylphosphine)palladium(0).

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2005:478998 CAPLUS
- DN 143:165982
- TI A pharmacophore-based evolutionary approach for screening selective estrogen receptor modulators
- AU Yang, Jinn-Moon; Shen, Tsai-Wei
- CS Department of Biological Science and Technology, National Chiao Tung University, Hsinchu, Taiwan
- SO Proteins: Structure, Function, and Bioinformatics (2005), 59(2), 205-220 CODEN: PSFBAF
- PB Wiley-Liss, Inc.
- DT Journal
- LA English
- AB The authors developed a pharmacophore-based evolutionary approach for virtual screening. This tool, termed the Generic Evolutionary Method for mol. DOCKing (GEMDOCK), combines an evolutionary approach with a new pharmacophore-based scoring function. The former integrates discrete and continuous global search strategies with local search strategies to expedite convergence. The latter, integrating an empirical-based energy function and pharmacol. preferences (binding-site pharmacol. interactions and ligand preferences), simultaneously serves as the scoring function for both mol. docking and postdocking analyses to improve screening accuracy. The authors apply pharmacol. interaction preferences to select the ligands that form pharmacol. interactions with target proteins, and use the ligand preferences to eliminate the ligands that violate the electrostatic or hydrophilic constraints. The authors assessed the accuracy of our approach using human estrogen receptor (ER) and a ligand database from the comparative studies of Bissantz et al. (J Med Chem 2000;43:4759-4767). Using GEMDOCK, the average goodness-of-hit (GH) score was 0.83 and the average false-pos. rate was 0.13% for ER antagonists, and the average GH score was 0.48 and the average false-pos. rate was 0.75% for ER agonists. The performance of GEMDOCK was superior to competing methods such as GOLD and DOCK. The authors found that our pharmacophore-based scoring function

indeed was able to reduce the number of false positives; moreover, the resulting pharmacol. interactions at the binding site, as well as ligand preferences, were important to the screening accuracy of our expts. These results suggest that GEMDOCK constitutes a robust tool for virtual database screening.

- OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (28 CITINGS)
- RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2004:548950 CAPLUS
- DN 141:134250
- TI Is it possible docking and scoring new ligands with few experimental data? Preliminary results on estrogen receptor as a case study
- AU Cozzini, P.; Dottorini, T.
- CS Molecular Modelling Laboratory, Department of General and Inorganic Chemistry, Parco Area delle Scienze, University of Parma, Parma, 43100, Italy
- SO European Journal of Medicinal Chemistry (2004), 39(7), 601-609 CODEN: EJMCA5; ISSN: 0223-5234
- PB Elsevier Science Ltd.
- DT Journal
- LA English
- AB Estrogens are steroid hormones playing critical roles in several physiol. processes, which bind the estrogen receptors  $ER\alpha$  and  $ER\beta$ . Aim of this work is to analyze, by different docking expts., the behavior of a set of compds., mimicking estrogens activity, to understand the relationship between  $ER\alpha$  and such new ligands. Main goal is to verify, using a widely tested scoring software procedure applied on a set of 10 compds., the possibility to produce new lead candidate mols. in lack of, or with few exptl. data. The authors' preliminary results reveal the significance of HINT software as a scoring function in docking methodol. and specifically, as a mean for assessing the consistency of docking solns.
- OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
  RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2004:42543 CAPLUS
- DN 140:246121
- TI Ligand-Based Structural Hypotheses for Virtual Screening
- AU Jain, Ajay N.
- CS UCSF Cancer Research Institute and Comprehensive Cancer Center, University of California, San Francisco, CA, 94143-0128, USA
- SO Journal of Medicinal Chemistry (2004), 47(4), 947-961 CODEN: JMCMAR; ISSN: 0022-2623
- PB American Chemical Society
- DT Journal
- LA English
- AB The majority of drug targets for small mol. therapeutics are proteins whose three-dimensional structure is not known to sufficient resolution to permit structure-based design. All three-dimensional QSAR approaches have a requirement for some hypothesis of ligand conformation and alignment, and predictions of mol. activity critically depend on this ligand-based binding site hypothesis. The mol. similarity function used in the Surflex docking system, coupled with quant. pressure to minimize overall mol. volume, forms an effective objective function for generating hypotheses of bioactive conformations of sets of small mols. binding to their cognate proteins. Results are presented, assessing utility of the method for ligands of the serotonin, histamine, muscarinic, and GABAA receptors. The

Surflex similarity module (Surflex-Sim) was able, in each case, to distinguish true ligands from random compds. using models constructed from just two or three known ligands. True pos. rates of 60% were achieved with false pos. rates of 0-3%; the theor. enrichment rates were over 150-fold compared with random screening. The methods are practically applicable for rational design of ligands and for high-throughput virtual screening and offer competitive performance to many structure-based docking algorithms.

OSC.G 38 THERE ARE 38 CAPLUS RECORDS THAT CITE THIS RECORD (38 CITINGS)
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
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AN 2003:678670 CAPLUS

DN 139:192008

TI Methods and composition for treating decreased libido in women with estrogenic components

IN Coelingh Bennink, Herman Jian Tijmen

PA Pantarhei Bioscience B.V., Neth.

SO PCT Int. Appl., 17 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.			KIND DATE			APPLICATION NO.						DATE					
ΡI	WO	2003	0702	53		A1 20030828			WO 2003-NL125						20030219			
		W:	ΑE,	AG,	AL,	AM,	ΑT,	ΑU,	AZ,	ΒA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,
			CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,
			GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	KΖ,	LC,	LK,	LR,
			LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	OM,	PH,
			PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	ΤJ,	TM,	TN,	TR,	TT,	TZ,
			UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW						
		RW:	GH,	GM,	ΚE,	LS,	MW,	MΖ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	AZ,	BY,
			KG,	KΖ,	MD,	RU,	ТJ,	TM,	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,
			FI,	FR,	GB,	GR,	HU,	ΙE,	ΙΤ,	LU,	MC,	NL,	PT,	SE,	SI,	SK,	TR,	BF,
			ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	ΤG	
	AU	AU 2003206442			A1		2003	0909		AU 2	003-	2064	42		20	00302	219	
PRAI	EΡ	2002	-756	96		Α		2002	0221									
	WO 2003-NL125			W		2003	0219											

AB The present invention is concerned with a method of treating decreased libido in pre-menopausal women, said decreased libido being the result of the repeated administration of a progestogenic component, wherein the method comprises the administration of the estrogenic component to a woman in an effective amount to improve the woman's libido. The present method is particularly suited for treating decreased libido in women using hormonal contraceptives that employ administration of a progestogenic component.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
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AN 2003:498000 CAPLUS

DN 139:176251

TI BHB: A simple knowledge-based scoring function to improve the efficiency of database screening

AU Feher, Miklos; Deretey, Eugen; Roy, Samir

CS SignalGene Inc., Guelph, ON, N1G 4P7, Can.

SO Journal of Chemical Information and Computer Sciences (2003), 43(4), 1316-1327

CODEN: JCISD8; ISSN: 0095-2338

PB American Chemical Society

- DT Journal
- LA English
- A new knowledge-based scoring function was developed in this work to facilitate the rapid ranking of ligands in databases. The acronym of the method is BHB based on the descriptors it utilizes:buriedness, hydrogen bonding, and binding energy. Receptor buriedness is a measure of how well mols. occupy the binding pocket in comparison to known high-affinity ligands or, alternatively, whether they have contact with identified residues in the pocket. The possibility of hydrogen bond formation is checked for selected residues that are recognized as being important in the binding of known ligands. The approx. binding energy is calculated from the thermodn. cycle using the optimized bound and free solvent conformations of the ligand-receptor system. The information necessary for the scoring function can ideally be gleaned from the 3D structure of the receptor-ligand complex. Alternatively, the descriptors can be derived from the 3D structure of the unbound receptor, provided this receptor has a known ligand that binds to the given site with nanomolar activity. We show that the new scoring functions provide up to 12 times improvement in enrichment compared to the popular com. docking program GOLD.
- OSC.G 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)
  RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2002:940242 CAPLUS
- DN 137:380017
- TI Estrogen receptor  $\beta$ -based hypertension treatment and assay
- IN Gustafsson, Jan-Ake; Bian, Zhao
- PA Karo Bio AB, Swed.
- SO Brit. UK Pat. Appl., 28 pp. CODEN: BAXXDU
- DT Patent
- LA English
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	GB 2374412	A	20021016	GB 2001-9091	20010411
PRAT	GB 2001-9091		20010411		

AB Methods are disclosed for assaying compds. for blood pressure-modulating activity. The methods include determining the ability of the compound to

estrogen receptor  $\beta$  (ER $\beta$ ) activity. The invention also discloses the use of ER $\beta$ -modulating compds. for modulating blood pressure, in particular for treating hypertension.

- OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
- L4 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2002:210373 CAPLUS
- DN 137:87830
- TI Molecular simulation of interaction between estrogen receptor and selective estrogen receptor modulators
- AU Guo, Zong-Ru; Yi, Xiang; Xu, Zhi-Bin
- CS Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, 100050, Peop. Rep. China
- SO Acta Pharmacologica Sinica (2002), 23(3), 208-212 CODEN: APSCG5; ISSN: 1671-4083
- PB Science Press
- DT Journal
- LA English
- AB Aim: To study the mechanism of interaction between a series of potent racemic selective estrogen receptor modulators (SERM) and estrogen

receptors (ER). Methods: Active conformations of these conformationally restricted raloxifene analogs in binding pocket were determined by mol. mechanics. The interactive energies between ligand and receptor were calculated by docking program. Results: Both R and S configurations of these SERM were accommodated by the binding pocket of ER. The hydroxy group of compds. forms hydrogen bonds with amino acid residues of ER and the phenolic group mimics the A-ring of estradiol. The most potential compds. were those with two hydroxy groups and accommodated by binding pocket in S configuration with phenolic group at C(16) imitating A-ring of estradiol. Conclusion: Chiral center conferred little effect on the binding affinity of these conformationally restricted raloxifene analogs. The hydroxy group(s) play(s) a critical role to the orientation of compds. in active pocket of ER and the binding between ligand and receptor.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L4 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 2000:818588 CAPLUS
- DN 134:125545
- TI Protein-Based Virtual Screening of Chemical Databases. 1. Evaluation of Different Docking/Scoring Combinations
- AU Bissantz, Caterina; Folkers, Gerd; Rognan, Didier
- CS Department of Applied Biosciences, ETH Zuerich, Zurich, CH-8057, Switz.
- SO Journal of Medicinal Chemistry (2000), 43(25), 4759-4767 CODEN: JMCMAR; ISSN: 0022-2623
- PB American Chemical Society
- DT Journal
- LA English
- AΒ Three different database docking programs (Dock, FlexX, Gold) have been used in combination with seven scoring functions (Chemscore, Dock, FlexX, Fresno, Gold, Pmf, Score) to assess the accuracy of virtual screening methods against two protein targets (thymidine kinase, estrogen receptor) of known three-dimensional structure. For both targets, it was generally possible to discriminate about 7 out of 10 true hits from a random database of 990 ligands. The use of consensus lists common to two or three scoring functions clearly enhances hit rates among the top 5% scorers from 10% (single scoring) to 25-40% (double scoring) and up to 65-70% (triple scoring). However, in all tested cases, no clear relationships could be found between docking and ranking accuracies. Moreover, predicting the absolute binding free energy of true hits was not possible whatever docking accuracy was achieved and scoring function used. As the best docking/consensus scoring combination varies with the selected target and the physicochem. of target-ligand interactions, we propose a two-step protocol for screening large databases: (i) screening of a reduced dataset containing a few known ligands for deriving the optimal docking/consensus scoring scheme, (ii) applying the latter parameters to the screening of the entire database.
- OSC.G 383 THERE ARE 383 CAPLUS RECORDS THAT CITE THIS RECORD (384 CITINGS)
  RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L4 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
- AN 1998:215077 CAPLUS
- DN 128:266187
- OREF 128:52547a,52550a
- TI Synthesis and Pharmacology of Conformationally Restricted Raloxifene Analogs: Highly Potent Selective Estrogen Receptor Modulators
- AU Grese, Timothy A.; Pennington, Lewis D.; Sluka, James P.; Adrian, M. Dee; Cole, Harlan W.; Fuson, Tina R.; Magee, David E.; Phillips, D. Lynn; Rowley, Ellen R.; Shetler, Pamela K.; Short, Lorri L.; Venugopalan,

Murali; Yang, Na N.; Sato, Masahiko; Glasebrook, Andrew L.; Bryant, Henry

- CS Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN, 46285, USA
- SO Journal of Medicinal Chemistry (1998), 41(8), 1272-1283 CODEN: JMCMAR; ISSN: 0022-2623
- PB American Chemical Society
- DT Journal
- LA English

GΙ

Raloxifene is a selective estrogen receptor modulator (SERM) which is AB currently under clin. evaluation for the prevention and treatment of postmenopausal osteoporosis. In vivo structure-activity relationships and mol. modeling studies indicated that the orientation of the basic amine-containing side chain of raloxifene relative to the stilbene plane is an important discriminating factor for the maintenance of tissue selectivity. A series of raloxifene analogs where this side chain is held in an orientation which is orthogonal to the stilbene plane, similar to the low-energy conformation predicted for raloxifene were constructed. These analogs were prepared and tested for their activity in a series of in vitro and in vivo biol. assays reflective of the SERM profile. The ability of these analogs to (1) bind the estrogen receptor, (2) antagonize estrogen-stimulated proliferation of MCF-7 cells in vitro, (3) stimulate  $TGF-\beta 3$  gene expression in cell culture, (4) inhibit the uterine effects of ethynyl estradiol in immature rats, and (5) potently reduce serum cholesterol and protect against osteopenia in ovariectomized (OVX) rats without estrogen-like stimulation of uterine tissue is detailed. These data demonstrate that LY357489 (I) is among the most potent SERMs described to date with in vivo efficacy on bone and cholesterol metabolism in OVX rats at doses as low as 0.01 mg/kg/d.

OSC.G 92 THERE ARE 92 CAPLUS RECORDS THAT CITE THIS RECORD (92 CITINGS)
RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:180547 CAPLUS

DN 128:217362

OREF 128:43059a,43062a

TI Preparation of benzothienobenzopyrans, benzophenanthridines, and related compounds for treatment of postmenopausal syndrome.

IN Grese, Timothy Alan

PA Eli Lilly and Co., USA

SO U.S., 39 pp. CODEN: USXXAM

DT Patent

LA FAN.	English CNT 2						
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
PΙ	US 5726186	A	19980310	US 1996-696279	19960813		
	US 6004971	A	19991221	US 1997-878799	19970619		
	US 6133288	A	20001017	US 1999-436743	19991109		
PRAI	US 1995-3496P	P	19950908				
	US 1996-696279	А3	19960813				
	US 1997-878799	A1	19970619				
OS	MARPAT 128:217362						
GI							

$$R^{2}$$
 $R^{3}$ 
 $R^{1}$ 
 $X$ 
 $O(CH_{2})_{n}WR^{4}$  I

AB Title compds. [I; X = O, S; Y = O, S, CH2, CH2CH2, CH:CH, NR5; R1-R3 = H, OH, alkoxy, PhCO2, alkylcarbonyloxy, alkylsulfonyloxy, OSO2CF3, Cl, F; n = 1, 2; W = CH2, CO; R4 = 1-piperidinyl, 2-oxo-1-piperidinyl, 1-pyrrolidinyl, methyl-1-pyrrolidinyl, dimethyl-1-pyrrolidinyl, 2-oxo-1-pyrrolidinyl, 4-morpholino, dimethylamino, diethylamino, 1-hexamethyleneimino; R5 = alkyl, PhCO, alkylcarbonyl, phenoxycarbonyl, alkoxycarbonyl, alkylsulfonyl, phenylsulfonyl, SO2CF3], were prepared Thus, 6-methoxythianaphthalen-2-one (preparation given) was stirred with 4-methoxysalicylaldehyde and Et3N in CH2Cl2 to give 6a,11a-dihydro-3,9-dimethoxy-6H-[1]benzothieno[3,2-c][1]benzopyran-6-one. This was converted in several steps to 3,9-dihydroxy-6-[4-[2-(1-piperidinyl)ethoxy]phenyl]-6H-[1]benzothieno[3,2-c][1]benzopyran. The latter at 0.1 mg/kg in ovariectomized rats reduced serum cholesterol by 72.8%.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 21 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN L41997:286346 CAPLUS ΑN DN126:264018 OREF 126:51137a,51140a ΤI Preparation of pentacyclic compounds for the treatment conditions associated with post-menopausal syndrome Grese, Timothy Alan ΙN Eli Lilly and Co., USA PASO Eur. Pat. Appl., 72 pp. CODEN: EPXXDW DT Patent

LA English FAN.CNT 2

	PATENT NO.	K	IND DATE		APPLICATION NO				
PI	EP 761669 EP 761669 EP 761669	Ž Ž	A2 1997	0312 1029	EP 1996-306351				
	R: AT, B CA 2230974 WO 9709044 W: AL, A IS, J MW, M	E, CH, DE	E, DK, ES, A1 1997 A1 1997 Z, BB, BG, G, KP, KR, Z, PL, RO,	FI, FR, 0313 0313 BR, BY, KZ, LK,	GB, GR, IE, I CA 1996-223097 WO 1996-US1377 CA, CN, CU, C LR, LS, LT, L SG, SI, SK, T	4 8 Z, EE, GE, V, MD, MG	19960826 19960826 , HU, IL, , MK, MN,	SE	
	RW: KE, L	S, MW, SI	o, SZ, UG,	BF, BJ,	CF, CG, CI, C	M, GA, GN	, ML, MR,		
	AU 9669590 AU 705454	I	A 1997 32 1999		AU 1996-69590		19960826		
	CN 1201392 HU 9802213 HU 9802213	2 2	A 1998 A2 1999 A3 2000	0201	CN 1996-198083 HU 1998-2213		19960826 19960826		
	BR 9610356 JP 11514347		A 1999 Г 1999	0706 1207	BR 1996-10356 JP 1997-511257		19960826 19960826		
	CZ 286236 IL 123560	Ā	36 2000 A 2002	0216 0210	CZ 1998-678 IL 1996-123560 IL 1996-140162		19960826		
	NO 9800936	7 7 7	A 1998	1215 0507	AT 1996-306351 NO 1998-936 GR 2001-400073		19960902 19980304		
PRAI	US 1995-3496P IL 1996-12356 WO 1996-US137	0 <i>A</i>	1995 A3 1996	0908 0826					
OS GI	MARPAT 126:26	4018							

<sup>\*</sup> STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AΒ The title compds. [I and II; X = O, S, NR5 (wherein R5 = C1-3 alkyl, COPh, SO2CF3, etc.); Y = O, S, CH2, CH2CH2, CH:CH, NR5; B = CH2, CO; R1-R3 = H, OH, O(C1-C4 alkyl), etc.; n = 1, 2; W = CH2, CO; R4 = 1-piperidinyl, 2-oxo-1-piperidinyl, 1-pyrrolidinyl, etc.], useful for the treatment of the various conditions associated with post-menopausal syndrome such as osteoporosis, and uterine fibroid disease, endometriosis, and aortal smooth muscle cell proliferation, and as bone loss or resorption inhibitors and serum cholesterol levels lowering agents, were prepared and formulated. Thus, reaction of 3,9-bis[(tert-butyldimethylsilyl)oxy]-6phenox-6-H-[1]benzothieno[3,2-c][1]benzopyran with 4-(2-piperidinoethoxy) phenylmagnesium bromide in PhMe/THF followed by removal of TBDMS groups with TBAF in THF afforded III which showed IC50 of 0.2 nM against MCF-7 breast adenocarcinoma cells proliferation. OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)